

What is claimed is:

1. A vehicle headlamp unit comprising:

 luminous distribution control means for controlling a
direction or a range of illumination by light from a light source,
and

 an actuator for driving said luminous distribution
control means, said actuator comprising,

 a resin-molded casing, and

 a gear mechanism and a board contained in said
resin-molded casing,

 said resin-molded casing including,

 a step-like rib formed at an inner side of
a peripheral edge portion of said casing, and

 an opposed rib, formed at an outer side of
said peripheral edge portion, extending along a
channel-shaped groove recessed toward said step-like
rib.
2. The vehicle headlamp unit according to claim 1,

 wherein at least one of a plurality of gears of said gear
mechanism is made of a resin having self-lubricating
properties.
3. The vehicle headlamp unit according to claim 1, wherein
the step-like rib supports at least one of said gear mechanism

and said board.

4. A vehicle headlamp unit comprising:

luminous distribution control means for controlling a direction or a range of illumination by light from a light source, and

an actuator for driving said luminous distribution control means, said actuator comprising,

a resin-molded casing,

a gear mechanism contained in said resin-molded casing, and

a brushless motor, and

wherein said brushless motor comprising:

a stator coil fixedly-supported to one of a housing and a board;

a rotor, including a yoke that supports a rotor magnet provided around said stator coil, connected to a rotation shaft, and

a gear connected to said rotation shaft and in mesh with a gear mechanism, and

wherein said yoke and said gear are formed integrally with each other and are made of a resin.

5. The vehicle headlamp unit according to claim 4, wherein said yoke is connected to said rotation shaft by

insert-molding said rotation shaft substantially directly in said yoke.

6. The vehicle headlamp unit according to claim 4, wherein said yoke has a cylindrical container-shape; said rotor magnet has an annular shape, and is mounted on an inner peripheral surface of said yoke; said gear is formed integrally on a central portion of an outer end surface of said yoke; a shaft hole is formed through said gear to extend along a centerline of said gear, and said rotation shaft is passed through said shaft hole in a fitted condition.

7. A vehicle headlamp unit comprising:
luminous distribution control means for controlling a direction or a range of illumination by light from a light source, and
an actuator for driving said luminous distribution control means, said actuator comprising,
a resin-molded casing,
a gear mechanism contained in said resin-molded casing, and
a brushless motor, and
wherein said brushless motor comprising:

a stator coil fixedly supported to one of a housing and a board by a fixing means, and

a rotor, including a yoke which supports a rotor magnet provided around said stator coil, connected to a rotation shaft,

wherein said fixing means has a positioning structure for positioning said stator coil.

8. A vehicle headlamp unit comprising:

luminous distribution control means for controlling a direction or a range of illumination by light from a light source, and

an actuator for driving said luminous distribution control means, said actuator comprising,

a resin-molded casing,

a gear mechanism contained in said resin-molded casing, and

a brushless motor, and

wherein said brushless motor comprising:

a stator coil;

a rotor, including a yoke which supports a rotor magnet provided around said stator coil, connected to a rotation shaft, and

a core base, integrally connected to a core of said stator coil, for supporting said stator coil on a board;

wherein said core base includes:

engagement means for integrally connecting said core base to said core, and

terminals for supporting said core base on said board and for electrically connecting coils, wound on said core, to said board.

9. A vehicle headlamp unit comprising:

luminous distribution control means for controlling a direction or a range of illumination by light from a light source, and

an actuator for driving said luminous distribution control means, said actuator comprising,

a resin-molded casing,

a gear mechanism contained in said resin-molded casing, and

a brushless motor, and

wherein said brushless motor comprising:

a stator coil fixedly-supported to a housing or a board by a fixing means, and

a rotor, including a yoke which supports a rotor magnet provided around said stator coil, connected to a rotation shaft,

wherein said stator coil can be fitted on a boss formed at a housing and supporting said rotation shaft, said boss

including means for positioning said stator coil in a circumferential direction and an axial direction, and engagement means for holding a core of said stator coil in an axial direction of said boss.